

What is claimed is:

1. An assembly for use on a weapon of the type including a barrel and a handle adapted to contain and discharge a load of ammunition, said handle being a lower portion of said weapon, and said weapon having an upper portion, said assembly being adapted to said upper portion of said weapon and said assembly comprising,

a weapon operation detecting and tracking system including:

a battery operated microcontroller based assembly comprising:

detecting means for detecting activity typical to the operation of said weapon by detecting at least one of the properties of at least one event generated by said activity,

said detecting means being structured to supply a sufficient amount of electricity to the tracking means when detecting an event upon said weapon being operated, such that it activates said tracking means so that said tracking means becomes enabled and performs a tracking operation,

tracking means capable of storing data, including at least one program adapted for tracking said weapon operation events, said tracking means being structured so that it becomes enabled and performs a tracking operation upon activity being detected on said weapon by said detecting means,

control means on said assembly adapted to activate and reset to default said tracking means,

2. On the assembly recited on claim 1

means for ascertaining that said weapon has been discharged by monitoring of the output of at least two adequately disposed detecting elements upon

said weapon being discharged and establishing they have occurred substantially simultaneously.

3. On the assembly recited on claim 1

means for ascertaining upon discharging said weapon that either a discharge and reload or a discharge only has occurred by identifying the number of events that had taken place in substantially close succession to one each other within the time duration of a typical full cycle of said weapon.

4. The assembly in claim 1 in which said control means comprises at least one switch.

5. The assembly in claim 1 in which said control means is adapted to alter presets from said tracking means.

6. The assembly in claim 1 in which said detecting includes at least one mechanical switch.

7. The assembly in claim 6 in which provisions are implemented on the tracking means in order to isolate a first activity being detected by said mechanical switch from possible trailing false triggering.

8. The assembly in claim 6 in which said detecting switch means is adapted to function also as a control means.

9. The assembly in claim 1 in which said detecting means contain at least one piezoelectric component structured to generate a momentary amount of electricity upon said weapon being operated.

10. The assembly in claim 9 in which said momentary amount of electricity generated by said component, is utilized as an event reporting signal.

11. The assembly in claim 10 in which provisions are made such that will convert said momentary amount of electricity into an increased electrical pulse.
12. The assembly in claim 10 in which provisions are made such that said signal undergoes signal conditioning, which may include band pass filtering.
13. The assembly in claim 12 in which said reporting signal is subject to further signal conditioning which may include attenuation of the natural resonance frequency of said detecting component.
14. On the assembly recited on claim 9 means to determine that said weapon has been discharged and has reloaded automatically or has discharged or reloaded only, by detecting and identifying the characteristic electrical pulse pattern generated by either of these events taking place.
15. An assembly as recited on claim 1 including luminous signal means responsive to said tracking means so that it becomes illuminated whilst said weapon is being discharged
16. An assembly as recited on claim 15 in which said luminous signal means include a plurality of luminous indicators.
17. An assembly as recited on claim 16 whereby said luminous indicators are adapted to become respectively illuminated in correlation to said load of ammunition being depleted providing to the user a visual trailing reference of the progressive consumption of said load of ammunition.

18. The assembly in claim 1 in which said control means allows the user to modify the presets pertaining the relationship of the depletion count process and an specific luminous indicator becoming illuminated.

19. An assembly as recited on claim 15 in which said tracking assembly has battery resource testing capabilities that may include the capacity to generate a special luminous signal intended for reporting to the user about an approaching low battery condition.

20. On a weapon, of the type including a handle and a barrel adapted to contain and discharge a load of ammunition,  
Means for signaling a user of the progressive depletion of said load of ammunition by adequately disposed luminous signal means becoming momentarily illuminated in synchronicity with said weapon being discharged every time said weapon is discharged,  
Whereby said luminous signal means is a plurality of colored luminous indicators that become respectively illuminated following a predetermined sequence correlated to said load of ammunition being depleted, reporting thusly to the user the process of depletion of said load of ammunition.

21. The assembly on claim 1 comprising real time clock and non volatile memory provisions structured onto said tracking means including,  
communication provision to allow access to information stored in said memory provision

wherein said tracking means is structured to store on said memory provision, real time and date information generated by said real time clock in correlation to events being tracked of said weapon operation activity.